

## DECLARATION — Utility or Design Patent Application

Direct all correspondence to: <input checked="" type="checkbox"/>		Customer Number or Bar Code Label	29922	OR <input type="checkbox"/>	Correspondence address below						
<p>Name WILLIAM G. AUTON</p> <p>Address ESC/JAZ 40 WRIGHT STREET, BLDG 1120</p> <table border="1"> <tr> <td>City HANSCOM AFB MA</td> <td>State MA</td> <td>ZIP 01731-2903</td> </tr> <tr> <td>Country USA</td> <td>Telephone 781-377-4072</td> <td>Fax</td> </tr> </table> <p>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.</p>						City HANSCOM AFB MA	State MA	ZIP 01731-2903	Country USA	Telephone 781-377-4072	Fax
City HANSCOM AFB MA	State MA	ZIP 01731-2903									
Country USA	Telephone 781-377-4072	Fax									
NAME OF SOLE OR FIRST INVENTOR :		<input type="checkbox"/> A petition has been filed for this unsigned inventor									
Given Name Richard A. (first and middle [if any])		Family Name Soref									
Inventor's Signature	<i>Richard A. Soref</i>			Date 25 Sept '03							
Residence: City Newton Centre	State MA	Country USA	Citizenship USA								
Mailing Address 5 45 Westgate Road, Newton Centre, MA 02459											
City	State	ZIP	Country								
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor									
Given Name JOSE (first and middle [if any])		Family Name Menendez									
Inventor's Signature	<i>Jose Menendez</i>			Date 11/5/03							
Residence: City TEMPE	State AZ	Country USA	Citizenship USA								
Mailing Address 5 309 E. 14TH ST.											
City TEMPE	State AZ	ZIP 85281	Country USA								
<input checked="" type="checkbox"/> Additional inventors are being named on the <u>1</u> supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.											

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**DECLARATION FOR UTILITY OR  
DESIGN  
PATENT APPLICATION  
(37 CFR 1.63)**

Declaration  
Submitted  
with Initial  
Filing

OR

Declaration  
Submitted after Initial  
Filing (surcharge  
(37 CFR 1.16 (e))  
required)

Attorney Docket Number	AFB00670
First Named Inventor	Richard A. Soref - et al
<b>COMPLETE IF KNOWN</b>	
Application Number	
Filing Date	
Art Unit	
Examiner Name	

As the below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original and first inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Strain-Engineered Direct-Gap  $Ge/Sn_xGe_{1-x}$  Heterodiode and Multi-Quantum-Well-  
Photodetectors, Lasers, Emitters and Modulators grown on  $Sn_ySi_zGe_{1-y-z}$ -  
Buffered Silicon

(Title of the Invention)

the specification of which

is attached hereto

OR

was filed on (MM/DD/YYYY)  as United States Application Number or PCT International

Application Number  and was amended on (MM/DD/YYYY)  (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES	Certified Copy Attached? NO
<span style="border: 1px solid black; display: inline-block; width: 150px; height: 1.2em; vertical-align: middle;"></span>	<span style="border: 1px solid black; display: inline-block; width: 150px; height: 1.2em; vertical-align: middle;"></span>	<span style="border: 1px solid black; display: inline-block; width: 150px; height: 1.2em; vertical-align: middle;"></span>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

[Page 1 of 2]

## DECLARATION

ADDITIONAL INVENTOR(S)  
Supplemental Sheet  
Page 1 of 1

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name <b>John</b>		Family Name or Surname <b>Kouvetakis</b>	
Inventor's Signature	<i>J Kouvetakis</i>		
Residence: City <b>3 - Mesa</b>	State <b>AZ</b>	Country <b>USA</b>	Citizenship <b>USA</b>
Mailing Address <b>5032 E Indigo St</b>			
Mailing Address			
City <b>MESA</b>	State <b>AZ</b>	ZIP <b>85207</b>	Country <b>USA</b>
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name		Family Name or Surname	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	ZIP	Country
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name		Family Name or Surname	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
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PTO/SB/81 (02-01)

Approved for use through 10/31/2002. OMB 0651-0035

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Application Number	
Filing Date	
First Named Inventor	RICHARD A. SOREF
Title	STRAIN-ENGINEERING.....
Group Art Unit	
Examiner Name	
Attorney Docket Number	AFB00670

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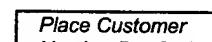
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Address	40 WRIGHT STREET, BLDG11120			
Address				
City	HANSCOM AFB	State	MA	Zip 01731-2903
Country				
Telephone	781-377-4072	Fax		

I am the:

Applicant/Inventor.  
 Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

### SIGNATURE of Applicant or Assignee of Record

Name	JOSE MENENDEZ
Signature	
Date	11/05/03

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

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Application Number	
Filing Date	
First Named Inventor	RICHARD A. SOREF, et al
Title	STRAIN-ENGINEERING....
Group Art Unit	
Examiner Name	
Attorney Docket Number	AFB00670

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Name	Registration Number
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Firm or  
Individual Name

ESC/JAZ

Address

40 WRIGHT STREET, BLDG 1120

Address

City

HANSCOM AFB

State

MA

Zip 01731-2903

Country

Telephone

781-377-4072

Fax

I am the:

Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.

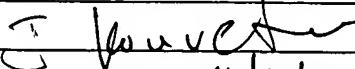
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

### SIGNATURE of Applicant or Assignee of Record

Name

JOHN KOUVETAKIS

Signature



Date

11/11/03

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